

ABSTRACT

**CORRELATION BETWEEN CHANGES IN CARTILAGE OLIGOMERIC
MATRIX PROTEIN (COMP) SERUM LEVELS AND WOMAC SCALE CHANGE
AFTER GIVING INTRA-ARTICULAR TRIAMCINOLONE INJECTION ON
PATIENTS WITH KNEE OSTEOARTHRITIS**

Objective: Osteoarthritis is a degenerative joint disease that causes pain and stiffness, sometimes inflammation accompanied by swelling which will cause limitation of movement, decreased muscle strength and balance, difficulties and limitations in activities which lead to a decrease or impaired quality of life. That one of the appropriate treatment modalities for all individuals with knee osteoarthritis from OARSI is by intra-articular corticosteroids. Symptom changes are documented on the WOMAC scale (pain, stiffness, physical function), while reduced serum levels of cartilage degradation products such as COMP directly indicate reduced cartilage degradation & reduce inflammation. The aim of this study was to analyze the correlations needed to prove that improved symptoms in the presence of corticosteroid therapy documented in the WOMAC score also implied a significant discontinuation or reduction in cartilage damage.

Method: Blood collection for measurement of COMP serum level and WOMAC scale data filling is performed before and 2 weeks after intra-articular triamcinolone injection is given. COMP serum levels were measured using the ELISA method.

Results: The research sample obtained was 19 samples who met the inclusion criteria. Serum levels of COMP and WOMAC scale values decreased significantly ($p = 0.016$ and $p = 0.001$) after 2 weeks given intra-articular triamcinolone injection. The results showed no significant correlation ($p = 0.827$ and $r = -0.054$) between changes in serum levels of COMP and WOMAC scale after intra-articular triamcinolone injection in knee osteoarthritis patients.

Conclusion: There is no correlation between changes in the serum level of COMP and the WOMAC scale after the administration of intra-articular triamcinolone injection in patients with knee osteoarthritis. The WOMAC scale value only reflects the level of symptoms that is not related to the degree of articular cartilage degeneration.

Keywords: *Cartilage Oligomeric Matrix Protein*, WOMAC scale, intra articular triamcinolone injection, knee osteoarthritis